Serial No.: 09/645,456
Filing Date: 24 August 2000

In the Claims:

Please amend Claims 20 and 22 as indicated below. Please add Claims 26-31. A clean set of the pending claims, including Claims 20 and 22 as amended, appears below.

19. (amended) A method of screening for a bioactive agent capable of binding to a TNIK protein, said method comprising:

a) combining a candidate bioactive agent and a TNIK protein; and

b) determining the binding of said candidate bioactive agent to said TNIK protein;

wherein said TNIK protein comprises an amino acid sequence selected from the group consisting of the amino acid sequences set forth by SEQ ID NOs:9-15.

20. (twice amended) A method of screening for a bioactive agent capable of interfering with the binding of a TNIK protein and a Traf2 or Nck protein, said method comprising:

a) combining a TNIK protein, a candidate bioactive agent, and a Traf2 or Nck protein; and

b) determining the binding of said TNIK protein to said Traf2 or Nck protein;

wherein said TNIK protein comprises an amino acid sequence having at least 95% identity to SEQ ID NO:34, and wherein said TNIK protein will bind to said Traf2 or Nck protein in the absence of said candidate bioactive agent.

21. (twice amended) The method of Claim 20, wherein said TNIK protein and said Traf2 or Nck protein are combined first.

22. (twice amended) A method of screening for a bioactive agent capable of modulating the activity of a TNIK protein, said method comprising:

a) adding a candidate bioactive agent to a cell comprising a recombinant nucleic acid encoding a TNIK protein; and

b) determining the effect of said candidate bioactive agent on said cell;

Serial No.: 09/645,456
Filing Date: 24 August 2000

wherein said TNIK protein comprises an amino acid sequence having at least 95% identity to SEQ ID NO:34, wherein said TNIK protein will bind to Traf2 or Nck, and wherein determining the effect of said candidate bioactive agent on said cell involves assaying at least one parameter selected from the group consisting of Nck activity, Traf2 activity, JNK pathway activity, F-actin disruption, cell spreading, phosphorylation of Gelsolin, mitosis, and cytokinesis.

23. (twice amended) The method of Claim 22, wherein a library of candidate bioactive agents is added to a population of cells comprising said recombinant nucleic acid encoding a TNIK protein.

24. The method of Claim 22, wherein determining the effect of said candidate bioactive agent on said cell involves assaying JNK pathway activation in said cell.

25. The method of Claim 22, wherein determining the effect of said candidate bioactive agent on said cell involves assaying F-actin disruption in said cell.

26. (new) The method of Claim 22, wherein determining the effect of said candidate bioactive agent on said cell involves assaying Nck activity.

27. (new) The method of Claim 22, wherein determining the effect of said candidate bioactive agent on said cell involves assaying Traf2 activity.

28. (new) The method of Claim 22, wherein determining the effect of said candidate bioactive agent on said cell involves assaying cell spreading.

29. (new) The method of Claim 22, wherein determining the effect of said candidate bioactive agent on said cell involves assaying phosphorylation of Gelsolin.

30. (new) The method of Claim 22, wherein determining the effect of said candidate bioactive agent on said cell involves assaying mitosis.